



# **NASA International Cooperation**



- Since 1958, NASA has concluded over 4000 agreements with over 100 nations and international organizations
- Cooperation now established with every region in the world
- Every Mission Directorate has international partnerships
- Of the approximately 48 SMD-led missions in operation, 29 have international contributions
- SMD is also participating in an additional 18 foreign-led operating science missions
- NASA follows foreign policy guidance from the Department of State

# **NASA International Cooperation**



- Current international cooperation:
  - Over 450 active international agreements
    - Access to unique capabilities or expertise
    - Increase mission flight opportunities
    - Enhance scientific return
  - 8 partners account for 50% of the agreements (France, Germany, ESA, Japan, UK, Italy, Canada, Russia)

# Why International Cooperation?



# The National Aeronautics and Space Act of 1958 directs NASA to conduct its activities so as to contribute materially to:

 "Cooperation by the United States with other nations and groups of nations in work done pursuant to the Act and in the peaceful application of the results thereof."

#### Benefits of international cooperation:

- Combining of financial resources
- Access to foreign capabilities or geography
  - Adds unique capability and/or expertise
  - Increases mission flight opportunities
  - · Enhances the scientific return
- Promote U.S. foreign policy interests

# **AO** Requirements



- Sections 5.7 and 5.8 of the Explorer AO lists 8
  requirements applicable to Non-U.S. Proposals and
  Proposals including Non-U.S. Participation and for
  Export Control. (Requirements 66-72, and 76)
- Sections 4.8 and 4.9 of the SALMON AO gives the requirements applicable to Non-U.S. Proposals and Proposals including Non-U.S. Participation and for Export Control.

Although written differently, the requirements are the same for full missions and missions of opportunity.

# **Cooperation Guidelines**



- Cooperation must be mutually beneficial
- Must have scientific/technical merit and meet NASA programmatic objectives
- International partners fund their respective contributions – not eligible for NASA funding
- If AO proposal is from a foreign entity or if U.S. AO proposal includes foreign participation a strong letter of endorsement is needed from the foreign partner's government agency or funding institution, acknowledging the activity and indicating sufficient funds will be made available

# **Cooperation Guidelines** (cont.)



- International partners are generally government agencies, but occasionally are universities or other institutes
- Contributions need not be equivalent
- Clearly defined and distinct managerial and technical interfaces
- Protects against unwarranted technology transfer and takes into account industrial competitiveness
- Cooperation to be documented in a written, specific agreement when needed

# **Challenges to Cooperation**



#### Management complexity

- Decision-making is more complex
- Communications difficulties
- Differing specifications, standards and assumptions

#### Technical and programmatic risk

- Interdependence the "critical path" issue
- Interfaces are difficult to manage at a distance; it's harder to monitor progress and get early warning of problems
- Multiple partners with multiple interfaces adds complexity

#### Political risk

- Budgetary and bureaucratic uncertainties
- Potential linkage to political activities or economic problems

# Why Do We Need Agreements?



#### International Agreements are tools that:

- clarify responsibilities of the partners
- confirm commitments and terms
- document the quid pro quo (benefits) of the cooperation
- protect investment and interests, such as:
  - technical data rights
  - intellectual property rights
  - allocation of risk -- cross-waiver of liability
- allow import/export of technical data and goods
- confirm arrangements to meet international obligations, such as UN Registration Convention, if necessary
- Note 1: International Agreements will likely take several months to put into place!
- Note 2: NASA International Agreements do not replace Technical Assistant Agreements (TAAs) for contractors

# NASA's International Agreements



 NASA's International Agreements do NOT trump export control laws & regulations

An International Agreement does not replace a contractor's need for a Technical Assistance Agreement

### **Questions?**



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